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117 L amplification Thor

WDTI

20 February 1958

MEMORANDUM FOR THE RECORD

SUBJECT: Project Able Phase II

1. In a series of meetings with R-W during the week of 10 February with Drs. Dunn, Mettler and Thiel participating, the following agreements were reached with regard to Phase II Project Able. To insure the earliest possible initiation of testing of Phase II Able, it was agreed that the configuration of Phase II would utilize the Vanguard 2 engine and MTL guidance. This would provide the earliest flight testing and such testing could be initiated in September 1958. At the same time, the group recognized that this was not necessarily the optimum configuration, especially if ICBM application was desired. It was agreed that a solid second stage represented a better approach to the ICBM application but that the Phase II combination selected would provide the development necessary to insure an early ICBM capability. Concurrently, it was felt that Douglas should initiate a study of the requirements for a solid second stage to define the optimum configuration in terms of second stage and payload weight.

2. All planning for Phase II should be directed towards the achieving of the earliest possible lunar flight capability. In this regard, R-W presented a preliminary plan for a lunar shot which did not involve second stage guidance. This plan will utilize retrorockets to slow down the vehicle in the vicinity of the moon which would allow the gravitational force of the moon to pull the vehicle in. R-W indicated that they wanted to do further evaluation of this proposal and would make a recommendation to RND at a later date. In the meantime, lunar capability would be spelled out for Phase II to Douglas noting that a final determination of how the lunar shot was to be tried had not been resolved and also that authority to make such a shot had not been received.

3. In the opinion of the group, Phase II should be limited to 8 vehicles pending further definition of the ICBM requirement and completion of the solid study by Douglas. The group also indicated that at this time, we should tentatively allocate the 24 missiles in the RND augmentation as follows:

10 - WS-117L
8 - Phase II Able
6 - Production Improvement for Thor

The production improvement flights are to be used towards advanced nose cone tests leading to 2000-mile range capability. It was recognized that this is not a precise allocation since 5 missiles from the current program are being diverted to this effort and accordingly, 5 of the current augmentation are not really assigned. It was also

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pointed out that the plan is for 117L to reimburse for the 10 boosters they buy which could provide a later augmentation of 10 additional missiles.

4. Flight test schedules were dependent upon too many aspects to attempt to resolve [redacted] during the course of meetings. It was agreed that Phase II should be pointed towards the earliest possible flight test (as indicated above, this looks like September) and that 117L should be pointed towards an October flight. The availability of additional launch facilities would, in large measure, determine how much additional testing can be supported this year.

5. The group also agreed that approximately 12 Vanguard second stages should be provided to insure flight testing of 8 vehicles. This would require 9 additional second stages utilizing the 3 additional already procured as spares for both Phase I and Phase II.

6. Specifically, R-W was asked to accomplish the following tasks:

a. To prepare a paper showing what satellite capability Phase I Able vehicles could provide and the earliest date at which this could be accomplished. This they promised by 19 February.

b. System specification for Phase II. To include study of possible lunar application and statement of the effort required to determine optimum solid configuration to provide ICBM capability. This was promised for 28 February.

c. Definition of a recommended plan for Phase II. To include identification of effort required, evaluation of how soon Phase II could be initiated and possible lunar application. R-W was also asked to provide an evaluation of the probability that AMMA could, this year, successfully impact on the moon. This was to be provided by 17 February.

d. An overall launch schedule, taking into account the requirements for WS-117L support and Phase II effort was to be provided to BMD by 19 February. A schedule of sub-system requirements in support of this program was to be provided by 26 February. This is to include MTL, AC, GE/Rose Canes and Vanguard second stage engines.

e. An evaluation of the Navaho launch complex for application to the Thor Program was to be provided by 17 February.

7. Following the internal meetings, Dr. Thiel and LtCol Jacobson discussed with Douglas Aircraft (Wheaton, Bromberg and Spencer) the Phase I, Phase II and 117L areas as noted above. Douglas indicated acceptance of the entire package in a spirit of "let's get on with the job!"

Original Signed By
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